



US009410558B2

(12) **United States Patent**
Heren

(10) **Patent No.:** **US 9,410,558 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **APPARATUS FOR RECOVERING ENERGY**

(56) **References Cited**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 349 days.

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(21) Appl. No.: **13/910,849**

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(22) Filed: **Jun. 5, 2013**

INPI Search Report for corresponding application FR 1255268 dated Feb. 28, 2013 (2 pages).

(65) **Prior Publication Data**

US 2013/0327030 A1 Dec. 12, 2013

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(30) **Foreign Application Priority Data**

Jun. 6, 2012 (FR) 12 55268

(57) **ABSTRACT**

Hydraulic apparatus for recovering energy, said apparatus comprising a hydraulic motor, and a high-pressure fluid source and a low-pressure fluid source. The apparatus has: an energy consumption mode, in which the fluid is transferred from the high-pressure fluid source to the low-pressure fluid source while driving the motor in rotation; and an energy accumulation mode, in which, by the action of the motor operating as a pump, the fluid is transferred from the low-pressure source to the high-pressure fluid source. The apparatus further comprises a pressure reducer disposed on a duct interconnecting the two fluid sources. In energy accumulation mode, if the level of the low-pressure source is tending to become excessively low, the reducer opens, enabling fluid to reach the low-pressure fluid source via the first duct.

(51) **Int. Cl.**

F15B 1/02 (2006.01)
B60K 6/12 (2006.01)
F02N 7/00 (2006.01)
F16H 61/4148 (2010.01)

(52) **U.S. Cl.**

CPC ... **F15B 1/02** (2013.01); **B60K 6/12** (2013.01);
F02N 7/00 (2013.01); **F16H 61/4148**
(2013.01); **Y02T 10/6208** (2013.01)

(58) **Field of Classification Search**

CPC F15B 21/14; F15B 2211/88; F15B 15/18
USPC 60/416
See application file for complete search history.

12 Claims, 4 Drawing Sheets

